

**ABSTRACT**

5 A thick film electrochemical microsensor device for measuring or  
regulating chlorine and bromine in water, comprising a substrate to which is  
applied an optimum arrangement of at least two electrodes. The device is  
especially useful for measuring or regulating chlorine and bromine levels in  
swimming pool or spa water. A method of measuring or regulating ions of  
at least one of chlorine and bromine in water is also described, which  
comprises contacting the water with the microsensor of the present  
10 invention; measuring the current output of the microsensor; determining the  
level of at least one of chlorine and bromine indicated by the current output;  
and generating a signal.